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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/801,189

Applicant(s)

NEWELL ET AL.

Examiner

CHAD DICKERSON

Art Unit

2625

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 5-8, 10 and 14-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5-8, 10 and 14-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 8 and 9, filed 3/12/2009, with respect to 101 rejections have been fully considered and are persuasive. The 101 rejections of claim 1-14 have been withdrawn.
2. Applicant's arguments with respect to claims 1, 3, 5-8, 10, 14-25 have been considered but are moot in view of the new ground(s) of rejection. The amendment to the claims has necessitated a new ground(s) of rejection. However, the same reference of Pavlovic '379 is being applied to the independent claims. In the remarks, the Applicant asserted that the applied references do not disclose the features of (1) performing an ordering feature that increases efficiency and adaptability, (2) having ordering functions distinct from one another and (3) outputting print jobs without having to reorder the print jobs in the print batch. The Examiner respectfully disagrees with all of these assertions.

Regarding the last assertion (3) pertaining to the claim limitation of "*outputting said plurality of print jobs without having to reorder the print jobs within the print batch*", the Examiner would like to bring Applicant's attention to figure 3 in the Pavlovic reference. Here, the specification shows an example of the decomposers placing the image data in the order in which they are expanded in the buffer. Given that each decomposer has different rates at which data is processed, the image data is placed in a manner where faster decomposers have data at the top of the buffer while slower decomposers have data at the end of the buffer. The Applicant asserted that because

the data in the buffer is gathered to reflect documents that are printed based on the stream handle, which is associated with a certain file, and these documents are not in a specified order, then this renders the claim deficient in outputting jobs without reordering the job data. The Examiner disagrees because if the system were to operate in a case of the system only containing two jobs, Postscript file 1 and Postscript file 2, these jobs could be placed in the buffer in the order in which they are to be received. Based on figure 3, one can determine that based on the way the files are placed on the buffer that the information in Postscript file 1 was decomposed before Postscript file 2 seeing as there is one postscript decomposer. Since the system working in this manner contains the buffer only containing two jobs, Postscript files 1 and 2, and file 1 is decomposed before file 2, then the jobs will be placed on the buffer and can be printed in that same manner¹. In this case, there is no reordering of the jobs since the jobs are no longer generated in random order, but the second job is processed after the first job is processed. If the Pavlovic reference operated in this case, then the invention would perform the feature of outputting jobs in the print batch without the reordering of jobs from the buffer memory. Therefore, with the above example being operated in the Pavlovic reference, the claim feature mentioned above is performed.

Regarding the feature of performing certain features to increase efficiency and adaptability of processing each batch, the Examiner considers this claim feature and those similar to this feature as a relative term and indefinite. The system may increase efficiency and adaptability in the Applicant's opinion, but the Applicant has not provided

¹ See Pavlovic '379 at col. 7, ll. 11 – col. 8, ll. 66 and figure 3.

any facts as to how this invention increases efficiency or adaptability of processing the print jobs and how the prior art does not perform these same features. A simple assertion stating that Pavlovic teaches against "increasing efficiency" since Pavlovic is based on information specified in a job description does not provide Applicant's invention with any patentable features over the applied prior art. Applicant has not provided disclosure or any other reasonable arguments that provide facts as to why the prior art would not teach the overall invention in claim 8. Additionally, this feature is a mere opinion of the Applicant that is listed in the specification. The claiming of the Applicant's opinion does not constitute a patentable feature over the prior art.

Secondly, the Examiner believes that the Pavlovic reference is used to increase the efficiency of the system in a manner by processing multiple jobs as if they were all one job and increasing adaptability of the system by processing multiple format jobs as one job². Therefore, with the above reasoning the Examiner believes that the added feature is both disclosed by the applied references and indefinite.

Regarding the feature of having the *"picking order, the transfer order, and the delivery order are each distinct from one another"*, the Examiner believes that three processes performed in the Pavlovic reference are distinct. In the system, the Examiner discloses the picking order as picking a sheet for a job, the transfer order as the transferring of data to the marker and the delivery order as the delivering of data to a certain output tray³. When looking at these different types of orders, the Examiner still believes that these are three distinct processes. The picking order does not affect or

² Id. at col. 7, ll. 1-50.

change the transfer order or delivery order nor do the other processes affect one another. The characteristics in the job specification govern these orders. Stated in the last Office Action (OA) are several details why the Examiner believed that the three order processes are disclosed by the Pavlovic reference and how the processes in the Pavlovic reference discloses three independent ordering processes. However, the Examiner will include the argument in the last action in order to make the record clear that the three ordering processes are disclosed.

As disclosed in column 7, lines 28-50, the job description is received by the system control (108). The system control (108) is used to set up the relationship between the decomposition facility y (110), buffer manager (120) and the marker (112). The system control (108) is used to evaluate, or analyze, the job description in order to identify specific tasks to be performed in the print system for yielding the desired output. For example, in column 8, lines 1-13, the system control (108) sends marker tasks to the marker (112) in order to communicate what data the marker should request from the buffer manager and what order to request the data. This is a clear example of the system control evaluating the information that characterizes the job, or job description, and the system control independently determining the manner in which to have print data transferred to the marker (112). Since transferring the printing information to the marker is the same as transferring the print information to the print hardware because the marker is the software component controlling the printing hardware for outputting the job (see col. 4, ln 1-17), the function of independently determining a transfer order of

³ Id. at col. 3, ll. 39 – col. 4, ll. 17 and col. 9, ll. 8-52.

the media sheets is performed. Similar to Applicant's invention, the system control, analogous to the imaging component, is used to evaluate a job description and determine a printing system function, which is similar to Applicant's invention.

Also, the Examiner considered the finishing portion of the system as the output portion since the delivering of physical media sheets are determined by the delivery order. The Pavlovic reference discloses having its system control (108) evaluate the job description in order to determine where the printed sheets will be delivered to. In other words, the Pavlovic reference determines based on the job description what tray to deliver printed sheets (see col. 6, ln 4-40). The Applicant argued that the delivery order was tied to the transfer order. The Examiner interprets this as the determination by the system controller (108) to deliver sheets to a certain tray is affected by the decision to transfer a job in either a low-load or heavy load conditions (see how the conditions of jobs change the manner they are transferred col. 10, ln 15-32). The Examiner sees no connection of how the media sheets being delivered to a certain tray has anything to do with the manner in which print information is delivered to the marker and printing hardware. In fact, the above quote by the Applicant just stated that the images that were transferred in a certain manner are output in a certain manner (N to 1). However, even this output does not have any effect on what tray, or output portion, the media sheets are to be delivered since description of the finishing requirement and the tray for depositing finished documents are two separate pieces of information in the job description.

Lastly, since the decision to pick a certain media sheet, transfer a job in different manners to the marker depending on the load conditions and to place a printed job on a certain output tray is based solely on the evaluation of the job description by the system control (108) and these determinations do not have any affect any of the above determinations, the Examiner believes that the pick, transfer and delivery order are all performed independently of one another. Therefore, with the above explanation, the Examiner still believes that the Pavlovic reference reads on all of the claim features in the independent claims.

Claim Objections

3. Claims 23-25 are objected to because of the following informalities:
- Claims -- 22-25 -- should be renumbered to -- 22-26 -- consecutively.
- Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:
- The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 1, 3, 5-8, 10, 14-18 and 22-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. The term "*to increase efficiency and adaptability of processing each batch*" in claims 1, 8 and 15 is a relative term which renders the claim indefinite. The term "*to increase efficiency and adaptability of processing each batch*" is not defined by the

claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. As stated in the above arguments, the scope of claim language cannot depend solely on the subjective opinions of individuals practicing the invention. How would one measure that the system increases the use of time in an effective manner and the adaptability of processing in the system? The dependent claims are also rejected because of their dependency on a rejected independent claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 8-22 and 24-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Pavlovic '379 (USP 5715379).

Re claim 8: Pavlovic '379 discloses a method of processing a print batch in a print device, comprising:

storing on a memory storage device of a formatter a print batch that includes a plurality of print jobs (i.e. Pavlovic '379 discloses the spool (106) being used to store the print job's PDL, which can include the actual image data to be printed and the job description. The files used to produce an image can be considered as a job since these

separate files in different formats correspond to the formation of an individual image per file. In the conventional system, the decomposed print jobs can be stored on the buffer on the decomposer until it is requested by other parts of the printing system. Used in the system of Pavlovic '379 is common image pools or buffer managers that can store more information to free up the decomposer; see figs. 1-3, col. 2, line 46—col. 3, line 67 and col. 7, line 10 – col. 10, line 42);

evaluating by an imaging component characteristics of said print batch to independently determine a pick order to increase efficiency of picking media sheets (i.e. in the system, the system control evaluates, or interprets that specification of the job description and determines the type of media picked, or chosen, for the image to be printed on. The Pavlovic reference is used to increase the efficiency of the system in a manner by processing multiple jobs as if they were all one job and increasing adaptability of the system by processing multiple format jobs as one job; see figs. 1-3; col. 2, line 46 — col. 4, line 61);

picking by a print engine said media sheets according to said pick order (i.e. in accordance with the job description, the system control chooses the tray that contains the specified paper to be used in the feeding process for imaging. The function of picking from different types of sheets to be used for a print job is performed; see figs. 1-3; col. 2, line 46 — col. 4, line 61 and col. 6, ln 4-55);

evaluating by the imaging component said characteristics to independently determine a transfer order of said print jobs to increase efficiency of transferring said

print jobs from said formatter to an imaging component (i.e. in the system, the decomposition facility (110) is considered to be the formatter since it is used to format incoming PDL into an uncompressed bitmap. The system control evaluates the job description and determines which jobs from the buffer manager or the common image pool is to be transferred to the printer hardware (114). This decision of transferring the jobs to the printer hardware is based on the stream handles and the job description that affects the stream handles. In the conventional system, the decomposer is used to store the data that is RIPed and then transfer that information to the image forming part of the printing system. The system evaluates the job description and the data stream of the job information and decides based on these characteristics what job data is output to the printing hardware. The Pavlovic reference is used to increase the efficiency of the system in a manner by processing multiple jobs as if they were all one job and increasing adaptability of the system by processing multiple format jobs as one job; see figs. 1-3; col. 6, ln 4-55 and col. 7, line 10 – col. 10, line 42);

transferring said print jobs from said formatter to said imaging component based on said transfer order (i.e. In the conventional system, the decomposer is used to store the data that is RIPed and then transfer that information to the image forming part of the printing system. This performs the feature of transferring the jobs from the formatter to the imaging component in the printing system. In the overall invention, the jobs are transferred from the buffer manager or the common image pool to the printer hardware based on the transfer order decided by the system control using the stream handles concept and the information from the job description. The system evaluates the job

description and the data stream of the job information and decides based on these characteristics what job data is output to the printing hardware. Depending on the load conditions of the print job, the jobs are transferred to the marker in a different manner; see figs. 1-3; col. 6, ln 4-55 and col. 7, line 10 – col. 10, line 42);

forming images by said print engine corresponding to said print jobs on media sheets (i.e. the printer hardware is used to form images that correspond to the print jobs on the sheets designated by the job description; see figs. 1-3; col. 2, line 46 — col. 4, line 61);

evaluating by the imaging component said characteristics to independently determine a delivery order of said media sheets to increase efficiency of delivering said media sheets (i.e. in the system, when the job description is evaluated, or interpreted, by the system control, the order of delivery of the printed images from the printer to the finisher in the system is determined using the stream handling concept. Whichever stream handle is chosen first is the stream of data that is first printed and finished. However, the document finished is delivered to a certain tray based on the information gained from the job specification, which was evaluated by the system control (108). The Pavlovic reference is used to increase the efficiency of the system in a manner by processing multiple jobs as if they were all one job and increasing adaptability of the system by processing multiple format jobs as one job; see figs. 1-3; col. 6, ln 4-55 and col. 7, line 10 – col. 10, line 42); and

delivering by said print engine said media sheets to an output portion of said print device based on said delivery order (i.e. in the system, the sheets that are printed are then delivered to the part of the printing system that performs the collation or stapling of the printed sheets; see figs. 1-3; col. 2, line 46 — col. 4, line 61, col. 6, ln 4-55 and col. 7, line 10 – col. 10, line 42).

Re claim 10: The teachings of Pavlovic '379 are disclosed above.

Pavlovic '379 discloses the method of claim 8, wherein said characteristics comprise an image receiving media type, an image size, an image processing time, or an image forming time (i.e. the job description has the type of media that will receive the image; see figs. 1-3; col. 2, line 46 — col. 4, line 61 and col. 6, ln 4-55).

Re claim 14: The teachings of Pavlovic '379 are disclosed above.

Pavlovic '379 discloses the method of claim 8, forming said images includes using said imaging component to convert data contained in said print job to commands (i.e. in the system, the marker, is used to take the PDL that makes up the image and the job specification and convert these components of the file into an instruction for the printer hardware; see figs. 1-3; col. 2, line 46 — col. 4, line 61);

conveying said commands to a print engine, and forming said images in response to said commands (i.e. the marker (112) is used to send the instructions of the

print file to the printer hardware in order for the printer hardware to accept the instructions and print the image that is described by the instructions; see figs. 1-3; col. 2, line 46 — col. 4, line 61).

Re claim 15: Pavlovic '379 discloses a print device, comprising:

a formatter configured to pool a batch of print data (i.e. in the conventional system, the decomposed print jobs can be stored on the buffer on the decomposer until it is requested by other parts of the printing system. Used in the system of Pavlovic '379 is common image pools or buffer managers that can store more information to free up the decomposer; see figs. 1-3; col. 7, line 10 – col. 10, line 42), wherein said batch includes a plurality of print jobs (i.e. in the system, the files are considered as a print job since these involve forming at least one image per format. The system can provide for a plurality of files in the system; see figs. 1-3; col. 2, line 46 — col. 4, line 61);

a processor having an imaging component residing thereon (i.e. the system controller is used as the processor and the processor performs the feature of the imaging component, which is the evaluation or the interpretation of the job specification. Therefore, the system control performs the feature of the imaging component; see figs. 1-3; col. 2, line 46 — col. 4, line 61), wherein said imaging component is configured to access batch information about said batch, including print media type, image size, image processing time, or image forming time (i.e. the system control accesses the files in the spool (106) and checks the job specification that is related to each file. The job

specification is used to help determine functions in relation to the files that are combined into one print job; see figs. 1-3; col. 2, line 46 — col. 4, line 61, col. 6, ln 4-55 and col. 7, line 10 – col. 10, line 42) and

based on said batch information, to independently determine a pick order for different types of print media to be used for different print jobs in order to increase picking efficiency (i.e. based on the job description, the size or type of paper to be used is picked by the printing system. The paper picked is from the paper trays used to feed print media into the printing system. The Pavlovic reference is used to increase the efficiency of the system in a manner by processing multiple jobs as if they were all one job and increasing adaptability of the system by processing multiple format jobs as one job; see figs. 1-3; col. 2, line 46—col. 3, line 67 and col. 6, ln 4-55),

independently determine a transfer order for transferring rasterized print job data to said imaging component in order to increase transfer efficiency (i.e. in the system, the different decomposers have different rates of decomposition depending on the complexity of the image data and other factors. However, the order of the print files being transferred to the printer hardware (114) is based on the stream handles assigned by the buffer manager (120). In the example listed in column 9, since the pages of the formats require stapling, the system determines to first transfer stream handle IV to the printer hardware and to perform this transfer in reverse order to stream handle I. Because of the characteristic of stapling the sheets, the stream handles are called in reverse order. With the stapling function and the different data streams taken into account, the different print jobs are submitted to the printing device in a certain order. In

the system, the common image pool is used to store decompressed bitmap images. These images can be given to the printing hardware directly from the common image pool in the order in which they are requested by the marker. Also, since the jobs can have different load conditions, the jobs can be transferred to the marker in different manners as well. The Pavlovic reference is used to increase the efficiency of the system in a manner by processing multiple jobs as if they were all one job and increasing adaptability of the system by processing multiple format jobs as one job; see figs. 1-3; col. 5, ln 9-col. 6, ln 55 and col. 7, line 10 – col. 10, line 42), and

independently determine a delivery order of said print jobs in order to increase delivery efficiency (i.e. since the files transferred to the printer hardware are in reverse order, the delivery of the respective files to be printed and finished by the printer hardware and the finisher are also in reverse order. In this case, the job in the last format, Postscript file 2, is printed and stapled first since the pages are stacked face-up and stapled in the correct order with the first job on top of the rest of the finished files. This process determines when the printed images are to be sent to the finisher part of the printing system. However, the output tray, considered as the output portion, is chosen only based on the evaluation of the job specification. Therefore, the independent determination of delivering sheets to a certain tray is performed by the system control (108). The Pavlovic reference is used to increase the efficiency of the system in a manner by processing multiple jobs as if they were all one job and increasing adaptability of the system by processing multiple format jobs as one job; see figs. 1-3; col. 6, ln 4-55 and col. 7, line 10 – col. 10, line 42); and

such that the picking order, the transfer order, and the delivery order are each distinct from one another (i.e. since the decision to pick a certain media sheet, transfer a job in different manners to the marker depending on the load conditions and to place a printed job on a certain output tray is based solely on the evaluation of the job description by the system control (108) and these determinations do not have any affect any of the above determinations, the pick, transfer and delivery order are all performed independently of one another; see figs. 1-3; col. 6, ln 4-55 and col. 7, line 10 – col. 10, line 42); and

a print engine configured to form images on a plurality of media corresponding to said print jobs (i.e. since the printer hardware is used to perform the feature of printing the images on printing sheets in relation to the files in the system, the above feature is performed; see figs. 1-3; col. 2, line 46 — col. 4, line 61).

Re claim 16: The teachings of Pavlovic '379 are disclosed above.

Pavlovic '379 discloses the print device of claim 15, wherein said formatter is configured to perform raster image processing (i.e. the decomposers or decomposition facility (110) is used to decompress data and convert data into a uncompressed bitmap, since the PDL information is converted into the bitmap information to be printed by the printer hardware; see figs. 1-3; col. 4, line 1 – col. 5, line 36).

Re claim 17: The teachings of Pavlovic '379 are disclosed above.

Pavlovic '379 discloses the print device of claim 15, wherein said print engine comprises an inkjet print head (i.e. with the system able to perform printing using an ink-jet marking engine, it is understood that a ink-jet print head would be used with the ink-jet marking engine; see figs. 1-3; col. 4, line 1 – col. 5, line 36).

Re claim 18: The teachings of Pavlovic '379 are disclosed above.

Pavlovic '379 discloses the print device of claim 15, wherein said print engine is configured to pick said media according to said pick order (i.e. in the system, the system control is in the printer system and printer hardware is used to feed the print media from a certain tray when the printer hardware is instructed by the system control; see figs. 1-3; col. 2, line 46 — col. 4, line 61) and to deliver said media according to said delivery order (i.e. since the printer hardware is used to perform the feature of printing the images on printing sheets and to deliver these images to the finisher part of the printing system to provide finishing capability to the sheets, the above feature is performed; see figs. 1-3; col. 2, line 46 — col. 4, line 61).

Re claim 19: Pavlovic '379 discloses a printing system, comprising:

means for evaluating characteristics of a print batch (i.e. the system control (108) is used to evaluate, or interpret, the job description of the file, considered to be the

characteristics, and use this information to determine properties of the file or files in the overall print job; see figs. 1-3; col. 2, line 46 — col. 4, line 61); and

means for independently determining a pick order (i.e. based on the job description, the size and type of paper to be used is picked by the printing system. The paper picked is from the paper trays used to feed print media into the printing system; see figs. 1-3; col. 2, line 46—col. 3, line 67 and col. 6, line 4-55),

independently determining a transfer order (i.e. in the system, the different decomposers have different rates of decomposition depending on the complexity of the image data and other factors. However, the order of the print files being transferred to the printer hardware (114) is based on the stream handles assigned by the buffer manager (120). In the example listed in column 9, since the pages of the formats require stapling, the system determines to first transfer stream handle IV to the printer hardware and to perform this transfer in reverse order to stream handle I. Because of the characteristic of stapling the sheets, the stream handles are called in reverse order. Also, since the jobs can have different load conditions, the jobs can be transferred to the marker in different manners as well, thus changing the transfer order; see figs. 1-3; col. 6, line 4-55 and col. 7, line 10 — col. 10, line 42), and

independently determining a delivery order (i.e. since the files transferred to the printer hardware are in reverse order, the delivery of the respective files to be printed and finished by the printer hardware and the finisher are also in reverse order. In this case, the job in the last format, Postscript file 2, is printed and stapled first since the

pages are stacked face-up and stapled in the correct order with the first job on top of the rest of the finished files. This process determines when the printed images are to be sent to the finisher part of the printing system. However, the output tray, considered as the output portion, is chosen only based on the evaluation of the job specification. Therefore, the independent determination of delivering sheets to a certain tray is performed by the system control (108); see figs. 1-3; col. 6, ln 4-55 and col. 7, line 10 – col. 10, line 42),

based on said characteristics (i.e. these functions are all dependent on the job description and data stream content sent to the printing system; see figs. 1-3; col. 2, line 46—col. 3, line 67),

wherein the picking order, the transfer order, and the delivery order are either distinct from one another or the same as one another (i.e. since the decision to pick a certain media sheet, transfer a job in different manners to the marker depending on the load conditions and to place a printed job on a certain output tray is based solely on the evaluation of the job description by the system control (108) and these determinations do not have any affect any of the above determinations, the pick, transfer and delivery order are all performed independently of one another; see figs. 1-3; col. 6, ln 4-55 and col. 7, line 10 – col. 10, line 42).

Re claim 20: The teachings of Pavlovic '379 are disclosed above.

Pavlovic '379 discloses the system of claim 19, and further comprising means for picking media according to said pick order (i.e. once the sheet to use is determined from the system control, the printing system is notified of the tray to feed the paper to be used to feed the media in order to print on the sheet; see figs. 1-3; col. 2, line 46 — col. 4, line 61),

transferring print jobs of said print batch according to said transfer order (i.e. using the stream handles that are designated by the system control to the buffer manager (120), the system transfers the print files from the buffer or pool to the printer hardware for printing according to the order chosen by the system control though the buffer; see figs. 1-3; col. 7, line 10 — col. 10, line 42), and

delivering said media according to said delivery order (i.e. the sheets with the printed images are also delivered to the finishing part of the printing system in the same order as the printing files where sent to the printing hardware for printing; see figs. 1-3; col. 7, line 10 — col. 10, line 42).

Re claim 21: The teachings of Pavlovic '379 are disclosed above.

Pavlovic '379 discloses the system of claim 19, and further comprising means for forming an image on said media (i.e. since the printer hardware is used to perform the feature of printing the images on printing sheets in relation to the files in the system, the above feature is performed; see figs. 1-3; col. 2, line 46 — col. 4, line 61).

Re Claim 22: The teachings of Pavlovic '379 are disclosed above.

Pavlovic '379 discloses the method of claim 1, wherein independently determining transfer order is based on image complexity, image size, or data transfer time (i.e. in the system, the transfer order of the image data from the decomposer is based on the complexity of the image data; see col. 8, lines 29-53).

Re Claim 23: The teachings of Pavlovic '379 are disclosed above.

Pavlovic '379 discloses the method of claim 1, wherein independently determining pick order, transfer order, and delivery order is based on size of the print job in terms of memory space required (i.e. in the system of Pavlovic, the rate of the decomposers is based on the amount of memory space the actual job contains. The smaller the memory space the complexity of the job encompasses, the faster the job is processed, but the larger the memory space is based on a more complex document, the slower the system can process the job or jobs; see col. 8, lines 29-53).

Re Claim 24: The teachings of Pavlovic '379 are disclosed above.

Pavlovic '379 discloses the method of claim 1, wherein independently determining pick order, transfer order, and delivery order is based on color scheme (i.e. in the system, the system determines the pick order based on the color scheme of the paper used for the printing process; see col. 6, ll. 4-40).

Re Claim 25: The teachings of Pavlovic '379 are disclosed above.

Pavlovic '379 discloses the method of claim 1, wherein independently determining pick order, transfer order, and delivery order is based on image complexity of the print jobs in the print batch (i.e. in the system, the determined orders of the image data is based on the complexity of the image data since the formats and specific pages are taken into consideration when outputting the document; see col. 8, lines 29-53).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pavlovic '379 in view of Kageyama '117 (USP 7092117).

Re claim 1: Pavlovic '379 discloses a method of processing a print batch in a print device, comprising:

storing on a memory storage device a plurality of print jobs contained in said print batch (i.e. Pavlovic '379 discloses the spool (106) being used to store the print job's PDL, which can include the actual image data to be printed and the job description. The files used to produce an image can be considered as a job since these separate files in

different formats correspond to the formation of an individual image per file; see figs. 1-3; col. 2, line 46—col. 3, line 67);

evaluating by a processor residing on said print device said characteristics of said print jobs (i.e. the system control (108) is used to evaluate, or interpret, the job description of the file, considered to be the characteristics, and use this information to determine properties of the file or files in the overall print job; see figs. 1-3; col. 2, line 46 — col. 4, line 61 and col. 6, ln 4-55); and

independently determining by the processor a pick order (i.e. based on the job description, the size and type of paper to be used is picked by the printing system. The paper picked is from the paper trays used to feed print media into the printing system; see figs. 1-3; col. 2, line 46—col. 3, line 67 and col. 6, ln 4-55),

independently determining a transfer order (i.e. in the system, the different decomposers have different rates of decomposition depending on the complexity of the image data and other factors. However, the order of the print files being transferred to the printer hardware (114) is based on the stream handles assigned by the buffer manager (120). In the example listed in column 9, since the pages of the formats require stapling, the system determines to first transfer stream handle IV to the printer hardware and to perform this transfer in reverse order to stream handle I. Because of the characteristic of stapling the sheets and the stream handles, the pages to be stapled are called in reverse order. Also, since the jobs can have different load conditions, the

jobs can be transferred to the marker in different manners as well, thus changing the transfer order; see figs. 1-3; col. 7, line 10 – col. 10, line 42), and

independently determining a delivery order (i.e. since the files transferred to the printer hardware are in reverse order, the delivery of the respective files to be printed and finished by the printer hardware and the finisher are also in reverse order. In this case, the job in the last format, Postscript file 2, is printed and stapled first since the pages are stacked face-up and stapled in the correct order with the first job on top of the rest of the finished files. This process determines when the printed images are to be sent to the finisher part of the printing system. However, the output tray, considered as the output portion, is chosen only based on the evaluation of the job specification. Therefore, the independent determination of delivering sheets to a certain tray is performed by the system control (108); see figs. 1-3; col. 7, line 10 – col. 10, line 42)

based, at least in part, on said characteristics to increase efficiency and adaptability of processing each print batch (i.e. these functions are all dependent on the job description sent to the printing system. The Pavlovic reference is used to increase the efficiency of the system in a manner by processing multiple jobs as if they were all one job and increasing adaptability of the system by processing multiple format jobs as one job; see figs. 1-3; col. 2, line 46—col. 3, line 67),

such that the picking order, the transfer order, and the delivery order are each distinct from one another for a print engine configured to form images on a plurality of media corresponding to said print jobs(i.e. since the decision to pick a certain media

sheet, transfer a job in different manners to the marker depending on the load conditions and to place a printed job on a certain output tray is based solely on the evaluation of the job description by the system control (108) and these determinations do not have any affect any of the above determinations, the pick, transfer and delivery order are all performed independently of one another; see figs. 1-3; col. 6, ln 4-55 and col. 7, line 10 – col. 10, line 42); and

outputting said plurality of print jobs without having to reorder the print jobs within the print batch (i.e. if the system were to operate in a case of the system only containing two jobs, Postscript file 1 and Postscript file 2, these jobs could be placed in the buffer in the order in which they are to be received. Based on figure 3, one can determine that based on the way the files are placed on the buffer that the information in Postscript file 1 was decomposed before Postscript file 2 seeing as there is one postscript decomposer. Since the system working in this manner contains the buffer only containing two jobs, Postscript files 1 and 2, and file 1 is decomposed before file 2, then the jobs will be placed on the buffer in that same manner. In this case, there is no reordering of the jobs since the jobs are no longer generated in random order, but the second job is processed after the first job is processed; see fig. 3, col. 7, ll. 11 – col. 8, ll. 66).

However, Pavlovic '379 fails to specifically teach storing characteristics of a plurality of print jobs.

However, this is well known in the art as evidenced by Kageyama '117. Kageyama '117 discloses storing characteristics of a plurality of print jobs (i.e. the

invention of Kageyama is similar to the function of Pavlovic since both inventions involve sending a print job over to a printer for printing (same field of endeavor). However, shown in figure 5 are job tickets, which have the characteristics of a certain job and these are stored with their respective job in the archive within the printer; see fig. 5; col. 5, line 7 – col. 6, line 5).

Therefore, in view of Kageyama '117, it would have been obvious to one of ordinary skill at the time the invention was made to have the method step of storing characteristics of a plurality of print jobs in order to store a job ticket in the archive for a document (as stated in Kageyama '117 col. 5, lines 7-65).

Re claim 3: The teachings of Pavlovic '379 in view of Kageyama '117 are disclosed above.

Pavlovic '379 discloses the method of claim 1, wherein said characteristics comprise an image receiving media type (i.e. the job description has the type of media that will receive the image; see figs. 1-3; col. 2, line 46 — col. 4, line 61), an image size, an image processing time, or an image forming time.

Re claim 5: The teachings of Pavlovic '379 in view of Kageyama '117 are disclosed above.

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Pavlovic '379 discloses the method of claim 4, wherein said processor comprises an imaging component (i.e. in the printing system, the printer hardware (114) is considered as the imaging component since it prints the image on the sheet; see figs. 1-3; col. 2, line 46 — col. 4, line 61).

Re claim 6: The teachings of Pavlovic '379 in view of Kageyama '117 are disclosed above.

Pavlovic '379 discloses the method of claim 1, further comprising forming at least one image corresponding to each of said print jobs on an image receiving media (i.e. in the system, there is at least one image that corresponds to each format in the files that are being printed. These images are printed on a certain type of sheet that is described in the job description part of the files sent to the printer system; see figs. 1-3; col. 2, line 46 — col. 4, line 61).

Re claim 7: The teachings of Pavlovic '379 in view of Kageyama '117 are disclosed above.

Pavlovic '379 discloses the method of claim 6, wherein said images are formed according to said delivery order (i.e. the images in the system are formed due to the order in which the stream handles are chosen by the system. The order of the images being formed is based on the order in which the stream handles are picked and the

delivery of the print jobs to the printer hardware is the same as the delivery to the finisher; see figs. 1-3; col. 7, line 10 – col. 10, line 42).

11. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pavlovic '379 in view of Ferlitsch '442 (US Pub No 2005/0102442).

Re Claim 24: The teachings of Pavlovic '379 are disclosed above.

Pavlovic '379 discloses the method of claim 1, wherein independently determining pick order (i.e. based on the job description, the size and type of paper to be used is picked by the printing system. The paper picked is from the paper trays used to feed print media into the printing system; see figs. 1-3; col. 2, line 46—col. 3, line 67 and col. 6, in 4-55).

However, Pavlovic '379 fails to specifically teach wherein independently determining pick order is based on expected pick time.

However, this is well known in the art as evidenced by Ferlitsch '442. Ferlitsch '442 discloses wherein independently determining pick order is based on expected pick time (i.e. the system of Ferlitsch is similar to the invention of Pavlovic since it takes the image complexity into account when outputting an image (same field of endeavor). However, as disclosed in the system, the media sheets chosen for specific jobs are based on the time of day when a document is to be printed since this is the time when the media sheet is picked, based on the job's characteristics, and the print job is executed on the printing system; see paragraphs [0067]-[0077]).

Therefore, in view of Ferlitsch '442, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of wherein independently determining pick order is based on expected pick time, incorporated in the device of Pavlovic '379, in order to have an administrative policy that is responsive to the document complexity (as stated in Ferlitsch '442 paragraph [0068]).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
13. Shiohara '754 (US Pat No 6822754) discloses a system where the information related to the print job such as the type of page used for recording, the type of printing (color or monochrome) and other attribute information that is considered when choosing where to transfer print data information to a certain printer.
14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHAD DICKERSON whose telephone number is (571)270-1351. The examiner can normally be reached on 9:30-6:00pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Haskins can be reached on (571) 272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. D./
/Chad Dickerson/
Examiner, Art Unit 2625

/Twyler L. Haskins/
Supervisory Patent Examiner, Art Unit 2625